

S E C R E T

OSA-0869-69

8 April 1969

MEMORANDUM FOR: Chief, Air Force Branch, MMPD

SUBJECT : Reassignment of Military Protective Equipment Technicians

1. It is requested that [redacted] be reassigned PCS to Station H reporting during July 1970 as a replacement for [redacted]

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2. It is further requested that [redacted] be returned PCS to Station G reporting during August 1970 to allow minimum overlap at Station H.

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3. In view of the specialized protective equipment utilized by this activity, the very costly and extensive training required of the Technicians, and the lack of Air Force personnel qualified in such equipment, it is essential that qualified and experienced personnel be retained.

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USAF review(s) completed.

Distribution:

Orig & 1 - Addressee
3 - PD
1 - COMPT
1 - D/SA
1 - AMS
1 - IDEA
1 - D/O

[redacted]
Chief, Personnel Division

OSA/DDS&T
Distribution for
AMA/OSA

DATE 9 APR 1969

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25X1
DDS&T/OSA/PD/[redacted]

GROUP 1
Excluded from automatic
downgrading and
declassification

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26 MAR 1969

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I. Aero Medical Staff -- Input in Pilot Section, Training and Qualification

A. Life Support:

Pressure Suit - Measurement, Fitting, Training

1. Measurement: Approximately $\frac{1}{2}$ day per pilot at David Clark Co., Worcester, Mass. Generally conducted when project Pilot is on East coast for signing of contract (i. e., as early in the schedule as possible)

2. Fitting: Conducted generally as soon as equipment is completed and prior to the pilot starting checkout in the U-2 Aircraft.

a. Partial Pressure Suit (for use in U-2C/G Aircraft only) Production time from date of measurement to date of delivery is generally six (6) weeks. $1\frac{1}{2}$ -2 days per pilot is used for fitting at the David Clark Co., Worcester, Mass.

b. S-1010 Pilot's Protective Assembly ("full pressure suit" for use in the U-2R Aircraft only). Production time from date of measurement to date of delivery is generally 16 weeks. $1\frac{1}{2}$ -2 days per pilot is used for fitting at the David Clark Co., Worcester, Mass.

3. Training - Altitude Chamber Indoctrination Conducted as soon as possible after suit fitting, prior to the pilot starting checkout in the U-2 Aircraft. The altitude chamber flight is used to train the pilot in the protective aspects of his equipment to instill confidence and to confirm that the fit and comfort of the equipment is completely satisfactory.

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a. Partial Pressure Suit: Training generally conducted at various USAF Physiological Training Units (Edwards AFB, Castle AFB) by Detachment and Headquarters' life support personnel, may also be conducted at Detachment G if scheduling permits (Det G has altitude chamber but does not have proper personnel to utilize it unless supplemented by Headquarters' personnel. One (1) day per pilot is required.

b. S-1010 PPA: Training is conducted in the altitude chamber located at the ARO Corp., Buffalo, N.Y. One (1) day per pilot is required.

NOTES:

Partial Pressure Suit: This equipment, consisting of custom-fitted suit and coverall and standard USAF partial pressure helmet is only compatible with the ejection seat/oxygen system/seat kit/parachute of the smaller cockpit of the U-2C/G Aircraft. Physiologically the partial pressure suit maintains the total pressure on the pilot equal to 40,000 feet altitude should cabin pressurization fail at flight altitudes above 40,000 feet. 100% oxygen is breathed which gives the pilot a 10,000 ft equivalent oxygen level. Flight in the U-2C/G Aircraft without the partial pressure suit is limited to an altitude of 45,000 ft maximum. The outer coverall is made of flame resistant material for flash fire/crash fire protection. The equipment does not incorporate flotation or survival

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(water or otherwise) features, therefore such capabilities must be "added on" to the pilot (i.e., wearing underarm life preservers, survival clothing in kit/cushion etc.). The primary limitation of the partial pressure suit in both the uninflated and inflated state is fatigue produced by the required tight fit and by circulatory effects when the suit is inflated for extended periods.

S-1010 PPA: This custom-fitted garment incorporates pressure protection, flotation, survival protection, fire protection, under-water-breathing capability, urine-elimination system, and ventilation capability in one garment which can be worn indefinitely uninflated and for extended periods when inflated. This equipment is only compatible with the life support systems in the U-2R. The pressure protection maintains the pilot at an altitude equal to 35,000 feet should cabin altitude exceed this level. 100% oxygen is breathed which gives the pilot a sea-level equivalent oxygen level.

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C. Medical Screening and Selection

1. Review of Medical Records: AMS/OSA and USAF Surgeon General's Office review medical records of those pilot candidates selected by D/O/OSA review. The medical records are obtained by AMS/OSA through USAF SGO as soon as the list of candidates is received.

2. Initial Physical Examination: Candidates who show no disqualifying defects upon review of medical records are scheduled immediately for a Space Pilot-type examination at the USAF School of Aerospace Medicine, Brooks AFB, Texas (1 week)

3. Washington, D. C. Assessment and Evaluation Program: After a full field security clearance has been obtained, the candidates are brought to Washington, D. C. in a local hotel, for 3 to 4 days. (NOTE: At this point they are still unwitting of CIA involvement.) During this period the following are accomplished.

a. Screening by Assessment and Evaluation (A&E) Staff for 2 days. Agency psychologists are identified as being from an independent psychological testing firm or DAFC consultants.

b. Psychiatric Interview by a staff Psychiatrist from HQ's Staff OMS (1 hour)

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c. AMS/OSA Flight Surgeon, Field Flight Surgeon (Det G), and possibly an Aerospace Medical Consultant apply an adaptability rating to each candidate through interviews and social contacts. ARMA (Adaptability Rating, Military Aircraft) screening procedures are used.

d. Review of USAF School of Aerospace Medicine Physical examination results is conducted.

4. Section of Project Pilots

a. A conference is held by those involved in the Assessment and Evaluation Program at which time the required number of pilots are selected from the available candidates.

b. One or more pilots thus selected are then interviewed by PD/Compt, SS/OSA and AMS/OSA. During this interview the selectee is given a gradual introduction to the Program, phased in a manner which allows him to "opt out" any time. If no problems arise, he is then briefed and offered a job as a project pilot.

5. ANNUAL PHYSICAL EXAMINATION

After selection there is no further medical input into initial qualification of the project pilot. Each project pilot receives an annual physical examination at the LOVELACE CLINIC, Albuquerque, New Mexico, (Approximately 1 week) however, this is not part of his initial qualification.

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